

IMPROVED AUDIO SYSTEM WITH ACOUSTIC SHOCK CONTROL  
ABSTRACT OF DISCLOSURE

5           A cellular telephone (100, 1300) comprises an earpiece speaker (234, 1312)  
and a loudspeaker (238, 1316) that share a common resonator (e.g., 1436). Sharing a  
common resonator allows the common resonator to be made large thereby improving  
bass response. Undesirable acoustic coupling through the common resonator is  
addressed by driving the earpiece speaker with a cancellation filtered version of the  
10       loudspeaker drive signal when the loudspeaker is driven.